CLAIMS

What is claimed is:

1. A virus comprising a nucleic acid which encodes a fusion protein, wherein the fusion protein comprises:
   a) a viral protein, wherein the viral protein has at least one function, and
   b) a detectable protein, wherein the detectable protein and the viral protein are fused to maintain an open reading frame,
   wherein the virus is replication competent.

2. The virus of claim 1, wherein the fusion protein maintains the function of the viral protein.

3. The virus of claim 1, wherein the detectable protein is a fluorescent protein.

4. The virus of claim 1, wherein the virus is selected from the group consisting of: a retrovirus, an influenzavirus, a rhinovirus, a herpesvirus and a papillomavirus.

5. The virus of claim 4, wherein the herpesvirus is a Herpes Simplex Virus and can form replication compartments.

6. A replication competent herpesvirus that expresses a fusion protein, wherein the fusion protein comprises:
   a) a herpesviral protein, wherein the viral protein has at least one function, and
   b) a fluorescent protein,

wherein the fluorescent protein and herpesviral protein are fused to maintain an open reading frame and the virus is replication competent and can form a replication compartment.

7. The herpesvirus of claim 6, wherein the fluorescent protein is a green fluorescent protein.

8. A fusion protein comprising:

a) a viral protein from a virus, wherein the viral protein has at least one function, and

b) a detectable protein,

wherein the viral protein and detectable protein are fused to maintain the open reading frame.

9. The fusion protein of claim 8, wherein the fusion protein maintains the function of the viral protein.

10. The fusion protein of claim 8, wherein the virus is selected from the group consisting of: a retrovirus, an influenzavirus, a rhinovirus, a herpesvirus and a papillomavirus.

11. The fusion protein of claim 10, wherein the herpesvirus is a Herpes Simplex Virus.

12. The fusion protein of claim 11, wherein the herpesvirus is selected from the group consisting of: a Herpes Simplex Virus-1, a Herpes Simplex Virus-2, a varicella-zoster virus, a Epstein-Barr Virus, a Cytomegalovirus, a Human Herpesvirus-6, and a Human Herpesvirus-7.

13. The fusion protein of claim 8, wherein the detectable protein is a fluorescent protein.

14. The fusion protein of claim 13, wherein the fluorescent protein is a green fluorescent protein.

15. A fusion protein comprising:

a) a viral protein from a herpesvirus virus, the viral protein having a function, and

b) a fluorescent protein,

wherein the viral protein and the fluorescent protein are fused to maintain an open reading frame.

16. The fusion protein of claim 15, wherein the fusion protein maintains the function of the viral protein.

17. The fusion protein of claim 16, wherein the viral protein is an HSV-1 viral protein.

18. The fusion protein of claim 15, wherein the fluorescent protein is a green fluorescent protein.

19. A nucleic acid sequence that comprises a nucleic acid which hybridizes to the nucleotide sequence of SEQ ID NO: 1.

20. A virus comprising a nucleic acid which encodes the fusion protein of claim 8, wherein the virus is replication competent.

21. A method for determining whether a cell is a virus-resistance cell or a virus-susceptible cell, comprising:

a) contacting a virus that expresses the fusion protein of claim 8 with the cell to be tested, under conditions sufficient for the virus to infect the cell, and

b) detecting presence or absence of the fusion protein, wherein the absence of the fusion protein identifies a virus-resistant cell and the presence of the fusion protein identifies a virus-susceptible cell.

22. The method of claim 21, wherein the detectable protein is a fluorescent protein, and detecting the presence of absence of the fusion protein comprises detecting the presence or absence of the fluorescence emitted by the fusion protein.

23. A method for identifying an anti-viral agent or an agent that blocks the expression of the fusion protein of claim 8, comprising:

a) contacting a virus that expresses the fusion protein of claim 8, a host cell, and the agent to be tested, in conditions sufficient to allow for the virus to infect the cell, and

b) detecting the amount of the virus present, wherein a decrease in the amount of virus present identifies the agent.

24. The method of claim 23, wherein detecting the amount of virus present comprises detecting the amount of the fusion protein that is expressed by the virus, wherein a decrease in the amount of the fusion protein identifies the agent.

25. The method of claim 24, wherein the detectable protein is a fluorescent protein, and detecting the amount of the fusion protein comprises detecting the amount of the fluorescence emitted by the fusion protein.

26. The method of claim 23, wherein detecting the amount of virus present comprises detecting the amount of replication compartment formation, wherein a decrease of replication compartment formation identifies the agent.

27. A method for identifying an agent that reduces infection of a virus *in vivo*, comprising:

a) infecting a mammal with a virus that expresses the fusion protein of claim 8,

b) subjecting the mammal to the agent,

c) removing a portion of a tissue infected with said virus, and

d) detecting the amount of the fusion protein that is expressed by the virus, wherein a decrease in the amount of the fusion protein identifies the agent.

28. The method of claim 27, wherein the detectable protein is a fluorescent protein, and detecting the amount of the fusion protein comprises detecting the amount of the fluorescence emitted by the fusion protein.

29. An anti-viral agent or agent that blocks the expression of the fusion protein, as identified by the method of claim 23.

30. An agent that reduces infection of a virus *in vivo*, as identified by the method of claim 27.

31. A kit comprising the virus of claim 1.

32. The kit of claim 31, further comprising a complementing cell line.

33. The kit of claim 31, further comprising a cell into which the virus can be transfected.